IN THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-72 (Canceled).

Claim 73 (Withdrawn): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

mixing a matrix micropowder into a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 74 (Withdrawn): The method according to Claim 73, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 75 (Withdrawn): The method according to Claim 73, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm.

Claim 76 (Withdrawn): The method according to Claim 73, wherein the matrix micropowder has an average grain size d_{50} of 5 μm.

Claim 77 (Withdrawn): The method of Claim 74, wherein the fibers have an average length L50 of 20 to 150 μm.

Claim 78 (Withdrawn): The method according to Claim 74, wherein the fibers have an average length L50 of 40 to 70 μm.

Claim 79 (Withdrawn): The method according to Claim 74, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L50 of 10 to 100 μm.

Claim 80 (Withdrawn): The method according to Claim 74, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L50 of 10 to 80 μm.

Claim 81 (Withdrawn): The method according to Claim 73, wherein the droplets have an average diameter d_{50} of 10 to 70 μm.

Claim 82 (Withdrawn): The method according to Claim 73, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 83 (Withdrawn): A method for the production of a powder comprising a first component in the form of essentially spherical powder particle and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, and the fibers are embedded in the powder particles, comprising:

mixing a matrix micropowder with a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 84 (Withdrawn): The method according to Claim 83, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 85 (Withdrawn): The method according to Claim 83, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm.

Claim 86 (Withdrawn): The method according to Claim 83, wherein the matrix micropowder has an average grain size d_{50} of 5 μm.

Claim 87 (Withdrawn): The method of Claim 83, wherein the fibers have an average length L50 of 20 to 150 μm.

Claim 88 (Withdrawn): The method according to Claim 83, wherein the fibers have an average length L50 of 40 to 70 μm.

Claim 89 (Withdrawn): The method according to Claim 84, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L50 of 10 to 100 μm.

Claim 90 (Withdrawn): The method according to Claim 84, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L_{50} of 10 to 80 μm.

Claim 91 (Withdrawn): The method according to Claim 83, wherein the droplets have an average diameter d_{50} of 10 to 70 μm.

Claim 92 (Withdrawn): The method according to Claim 83, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 93 (Withdrawn): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates;

grinding the brittle, coarse granulates; and

separating the ground granulate into a fraction spectrum.

Claim 94 (Withdrawn): The method according to Claim 93, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 95 (Withdrawn): The method according to Claim 93, wherein the grinding is carried out with a pinned disk mill.

Claim 96 (Withdrawn): The method according to Claim 93, wherein the grinding is carried out with cooling.

Claim 97 (Withdrawn): The method according to Claim 93, wherein the separating is carried out with an air separator.

Claim 98 (Withdrawn): The method according to Claim 93, further comprising:

smoothing the ground granulate.

Claim 99 (Withdrawn): The method according to Claim 98, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 100 (Withdrawn): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates;

grinding the brittle, coarse granulates; and

separating the ground granulate into a fraction spectrum.

Claim 101 (Withdrawn): The method according to Claim 100, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 102 (Withdrawn): The method according to Claim 100, wherein the grinding is carried out with a pinned disk mill.

Claim 103 (Withdrawn): The method according to Claim 100, wherein the grinding is carried out with cooling.

Claim 104 (Withdrawn): The method according to Claim 100, wherein the separating is carried out with an air separator.

Claim 105 (Withdrawn): The method according to Claim 100, further comprising:

smoothing the ground granulate.

Claim 106 (Withdrawn): The method according to Claim 105, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 107 (Withdrawn): A method for producing a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment.

Claim 108 (Withdrawn): The method according to Claim 107, further comprising:

stirring at least one of stiffening fibers or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 109 (Withdrawn): The method according to Claim 107, wherein the droplets are formed in a hot gas jet.

Claim 110 (Withdrawn): The method according to Claim 107, further comprising:

separating the cooled droplets into a fraction spectrum.

Claim 111 (Withdrawn): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment.

Claim 112 (Withdrawn): The method according to Claim 111, further comprising:

stirring at least of stiffening or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 113 (Withdrawn): The method according to Claim 111, wherein the droplets are formed in a hot gas jet.

Claim 114 (Withdrawn): The method according to Claim 111, further comprising: separating the cooled droplets into a fraction spectrum.

Claim 115 (Withdrawn): A method for producing a spatial structure, comprising: melting the powder according to Claim 31.

Claim 116 (Withdrawn): The method according to Claim 115, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 117 (Withdrawn): A method for producing a spatial structure, comprising: melting the powder according to Claim 34.

Claim 118 (Withdrawn): The method according to Claim 117, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 119 (Withdrawn): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 31.

Claim 120 (Withdrawn): The molded body of Claim 119, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 121 (Withdrawn): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 34.

Claim 122 (Withdrawn): The molded body of Claim 121, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 123 (Withdrawn): The molded body according to Claim 119, comprising one or more interior reinforcements.

Claim 124 (Withdrawn): The molded body according to Claim 119, comprising a three-dimensional framework reinforcement.

Claim 125 (Withdrawn): The molded body according to Claim 121, comprising one or more interior reinforcements.

Claim 126 (Withdrawn): The molded body according to Claim 121, comprising a three-dimensional framework reinforcement.

Claim 127 (Withdrawn): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 54.

Claim 128 (Withdrawn): The molded body of Claim 127, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 129 (Withdrawn): The molded body according to Claim 128, comprising one or more interior reinforcements.

Claim 130 (New): A powder comprising a first fraction that is present in the form of substantially spherical powder particles as a matrix material, and at least one other fraction in the form of strengthening and/or reinforcing fibers, wherein the medium length L50 of the fibers maximally corresponds to the value of the medium grain size d50 of the spherical powder particles.

Claim 131 (New): The powder according to Claim 130, wherein the medium grain size d50 of the spherical powder particles lies in the range from 20 to 150 μm.

Claim 132 (New): The powder according to Claim 130, wherein the medium grain size d50 of the spherical powder particles lies in the range from 40 to 70 μm.

Claim 133 (New): A powder comprising a first fraction that is present in the form of substantially spherical powder particles as a matrix material, and at least one other fraction in the form of strengthening and/or reinforcing fibers, wherein the medium grain size d50 of the spherical powder particles is in the range from 20 to 150 μm.

Claim 134 (New): A powder according to Claim 133, wherein the medium grain size d50 of the spherical powder particles lies in the range from 40 to 70 μm.

Claim 135 (New): The powder according to Claim 130 or 133, wherein the fibers and the matrix material are mixed.

Claim 136 (New): The powder according to Claim 135, wherein the volume fraction of the fibers is up to 25%.

Claim 137 (New): The powder according to Claim 135, wherein the volume fraction of the fibers is up to 15%.

Claim 138 (New): The powder according to Claim 135, wherein the volume fraction of the fibers is up to 10%.

Claim 139 (New): The powder according to Claim 130 or 133, wherein the fibers are embedded into the matrix material.

Claim 140 (New): The powder according to Claim 139, wherein the fibers are substantially fully enclosed by the matrix material.

Claim 141 (New): The powder according to Claim 140, wherein the volume fraction of the fibers is greater than 15%.

Claim 142 (New): The powder according to Claim 140, wherein the volume fraction of the fibers is greater than 25%.

Claim 143 (New): The powder according to Claim 140, wherein the volume fraction of the fibers is greater than 30%.

Claim 144 (New): A powder comprising a first fraction that is present in the form of substantially spherical powder particles as a matrix material, and at least one other fraction in

the form of strengthening and/or reinforcing fibers, wherein the fibers are embedded into the matrix material.

Claim 145 (New): The powder according to Claim 144, wherein the fibers are substantially fully enclosed by the matrix material.

Claim 146 (New): The powder according to Claim 145, wherein the volume fraction of the fibers is greater than 15%.

Claim 147 (New): The powder according to Claim 145, wherein the volume fraction of the fibers is greater than 25%.

Claim 148 (New): The powder according to Claim 145, wherein the volume fraction of the fibers is greater than 30%.

Claim 149 (New): The powder according to Claim 130 or 133, wherein the matrix material is formed from a thermoplastic plastic material.

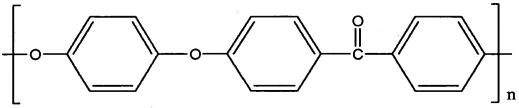
Claim 150 (New): The powder according to Claim 142, wherein the thermoplastic plastic material is a polyamide.

Claim 151 (New): The powder according to Claim 150, wherein the polyamide is PA11 or PA12.

Claim 152 (New): The powder according to Claim 130 or 133, wherein the fibers are formed from carbon and/or glass fibers.

Claim 153 (New): The powder according to Claim 130 or 133, wherein the matrix material is formed from an aromatic polyetherketone.

Claim 154 (New): The powder according to Claim 153, wherein the aromatic polyketone is a polyaryletherketone (PEEK) plastic comprising polymerized units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl-1,4-phenylene of the following formula:



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Claim 155 (New): The powder according to Claim 130 or 133, wherein the matrix material is formed from a metallic material.

Claim 156 (New): The powder according to Claim 130 or 133, wherein the fibers are selected from the group consisting of ceramic and boron fibers.

Claim 157 (New): The powder according to Claim 155, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 100 μm.

Claim 158 (New): The powder according to Claim 156, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 100 μm.

Claim 159 (New): The powder according to Claim 155, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 80 μm.

Claim 160 (New): The powder according to Claim 156, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 80 μm.

Claim 161 (New): The powder according to Claim 144, wherein the matrix material is formed from a thermoplastic plastic material.

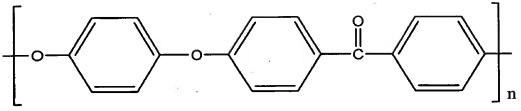
Claim 162 (New): The powder according to Claim 161, wherein the thermoplastic plastic material is a polyamide.

Claim 163 (New): The powder according to Claim 162, wherein the polyamide is PA11 or PA12.

Claim 164 (New): The powder according to Claim 144, wherein the fibers are formed from carbon and/or glass fibers.

Claim 165 (New): The powder according to Claim 144, wherein the matrix material is formed from an aromatic polyetherketone.

Claim 166 (New): The powder according to Claim 165, wherein the aromatic polyketone is a polyaryletherketone (PEEK) plastic comprising polymerized units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl-1,4-phenylene of the following formula:



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Claim 167 (New): The powder according to Claim 144, wherein the matrix material is formed from a metallic material.

Claim 168 (New): The powder according to Claim 144, wherein the fibers are selected from the group consisting of ceramic and boron fibers.

Claim 169 (New): The powder according to Claim 167, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 100 μm.

Claim 170 (New): The powder according to Claim 168, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 100 μm.

Claim 171 (New): The powder according to Claim 169, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 80 μm.

Claim 172 (New): The powder according to Claim 168, wherein the medium grain size d50 of the spherical powder particles lies in the range from 10 to 80 μm.

Claim 173 (New): A method for the production of a powder according to Claim 130 or 133, comprising:

mixing a matrix micropowder into a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates, wherein the liquid phase is further mixed with said strengthening and/or reinforcing fibers.

Claim 174 (New): A method for the production of the powder according to Claim 144, comprising:

mixing a matrix micropowder with a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates, wherein the liquid phase is further mixed with said strengthening and/or reinforcing fibers.

Claim 175 (New): A method for producing the powder according to Claim 130 or 133, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment, and further comprising:

stirring at least of stiffening or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 176 (New): A method for producing a spatial structure, comprising melting the powder according to Claims 130, 133 or 144 using powder-based generative rapid prototyping.

Claim 177 (New): A molded body obtained by the method of Claim 176.